



A3

ABSTRACT OF THE DISCLOSURE

2

3 This invention enables improved reception of ATSC terrestrial broadcast digital
4 television signals. ATSC DTV is a standard of the Advanced Television Systems
5 Committee (ATSC) for the terrestrial broadcast of digital television. ATSC DTV
6 broadcast signals are subject to impairment due to multipath. Improved radio reception
7 in multipath is possible when substantial reference components are transmitted as a
8 component of the transmitted radio. However, the introduction of new signal
9 components to the ATSC DTV broadcast signal represents a modification to the standard
10 which weaken the benefits of standardization. This invention resolves this dilemma by
11 carefully introducing data components into the data multiplex in a form compatible with
12 the ATSC DTV standard. Data components are chosen so as to induce a substantial
13 repeating reference component into the ATSC DTV modulation waveform. The induced
14 reference waveform enables clear reception in multipath while the integrity of the
15 standard is preserved.

16

17